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**FUN WITH HURRICANE IVAN – STUDENT WORKSHEET**

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**NAME:** \_\_\_\_\_ **CLASS:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**Question 1) Tropical cyclone development is defined in stages. What are they?**

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**Question 2) Hurricanes are placed into “categories” based on a scale. What is the scale called and what are the categories in it?**

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**Question 3) What kind of damage does each category do?**

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**Question 4) Define the following terms:**

Hurricane \_\_\_\_\_  
\_\_\_\_\_

Eve \_\_\_\_\_  
\_\_\_\_\_

Typhoon \_\_\_\_\_  
\_\_\_\_\_

Tornado \_\_\_\_\_  
\_\_\_\_\_

Coriolis Effect \_\_\_\_\_  
\_\_\_\_\_

Barometric  
Pressure \_\_\_\_\_  
\_\_\_\_\_

Surge \_\_\_\_\_  
\_\_\_\_\_

Eye Wall \_\_\_\_\_  
\_\_\_\_\_

**HURRICANE IVAN DATA ANALYSIS**

**Hurricane Tracking:** The center of the rotation, located in the middle of the eye, if there is one, marks the center of a tropical cyclone. To plot a hurricane's track, you need the latitude and longitude of the storm's center at a succession of times. The table below gives these coordinates for Hurricane Ivan in two-hour intervals. On your hurricane tracking chart, try to plot Hurricane Ivan's track.

Time	Date	Latitude	Longitude
1pm	9/15/2004	27.8 N	88.2 W
4pm	9/15/2004	28.4 N	88.3 W
6pm	9/15/2004	28.8 N	88.2 W
8pm	9/15/2004	29.0 N	88.2 W
10pm	9/15/2004	29.1 N	88.1 W
12am	9/16/2004	29.7 N	87.9 W
2am	9/16/2004	30.2 N	87.8 W
4am	9/16/2004	30.9 N	87.7 W
7am	9/16/2004	31.6 N	88.7 W
10am	9/16/2004	32.0 N	87.5 W
1pm	9/16/2004	32.6 N	87.1 W
1pm	9/16/2004	32.6 N	87.1 W

**Using the information in the table above, track Hurricane Ivan's movement through the Gulf of Mexico using the tracking chart provided.**

**Question 5) At what time did Hurricane Ivan make landfall? \_\_\_\_\_**

**Question 6) What was the date Hurricane Ivan made landfall? \_\_\_\_\_**

**Weather Maps:** On a weather map, meteorologists plot the temperature, pressure, and wind observed at different weather stations using a 'station plot'. The wind barb (or flags) shows the direction and speed of the wind. Each full barb represents 10 knots, half a barb is 5 knots, and a flag is 50 knots. The stem of the flag points in the direction from which the wind is blowing. A knot is a unit of measure for speed; to convert knots to miles per hour, divide the wind speed in knots by 1.15. The temperature in Celsius is on the left side of the plot and the pressure in millibars is on the right.

**Using the picture in the box to the right answer the following Questions:**

**7) What is the wind direction \_\_\_\_\_ ?**

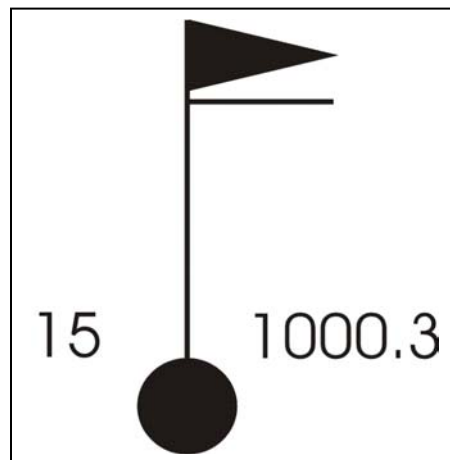
**8) What is the speed in knots \_\_\_\_\_ ?**

**9) What is the speed in miles per hour \_\_\_\_\_ ?**

**10) What is the pressure \_\_\_\_\_ ?**

**11) What is the temperature in Celsius \_\_\_\_\_ ?**

**12) What is the temperature in Fahrenheit \_\_\_\_\_ ?**





American Red Cross

# ATLANTIC HURRICANE TRACKING CHART

## Always remember

If you live along the coast or in a low-lying area, if you live in a mobile home in an area subject to hurricane water or wind, or if authorities tell you to... Go!

## Storm Surge

A storm surge is a dome of water often 50 miles wide that comes sweeping across the coastline near the area where the eye of the hurricane makes landfall. The surge, aided by the hammering effect of breaking waves, acts like a giant bulldozer sweeping away everything in its path. Nine out of ten hurricane deaths are caused by storm surge. That's why it's important to leave well before a hurricane may come your way.

## Wind Damage

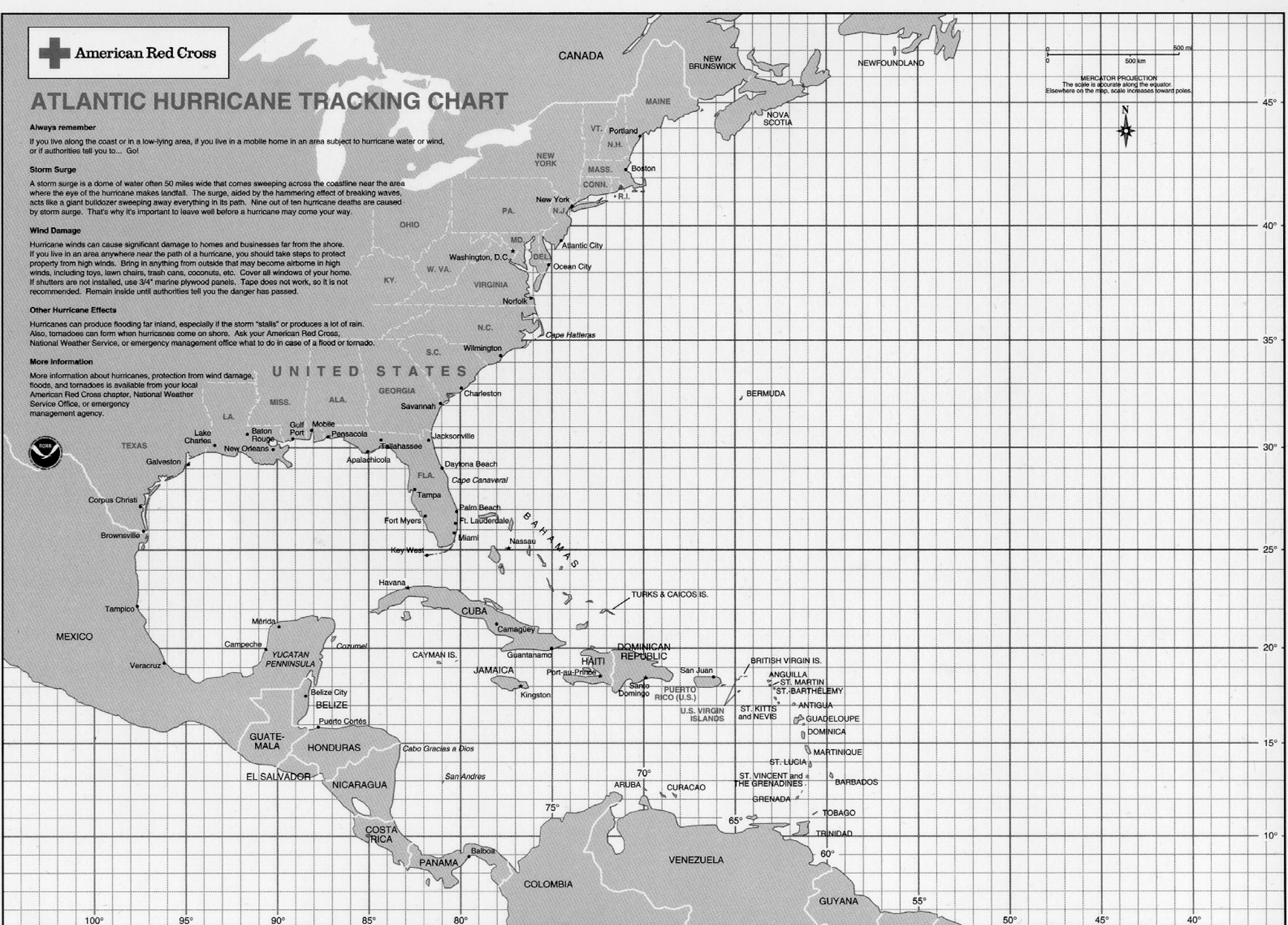
Hurricane winds can cause significant damage to homes and businesses far from the shore. If you live in an area anywhere near the path of a hurricane, you should take steps to protect property from high winds. Bring in anything from outside that may become airborne in high winds, including toys, lawn chairs, trash cans, coconuts, etc. Cover all windows of your home. If shutters are not installed, use 3/4" marine plywood panels. Tape does not work, so it is not recommended. Remain inside until authorities tell you the danger has passed.

## Other Hurricane Effects

Hurricanes can produce flooding far inland, especially if the storm "stalls" or produces a lot of rain. Also, tornadoes can form when hurricanes come on shore. Ask your American Red Cross, National Weather Service, or emergency management office what to do in case of a flood or tornado.

## More Information

More information about hurricanes, protection from wind damage, floods, and tornadoes is available from your local American Red Cross chapter, National Weather Service Office, or emergency management agency.



# ATLANTIC HURRICANE TRACKING CHART

